

REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the outstanding Office Action, the Examiner rejected claims 3-5 and 8-10, under 35 U.S.C. §112, ¶2, as allegedly being indefinite; and rejected claims 3-5 and 8-10, under 35 U.S.C. §102(e), as allegedly being anticipated by Sato '221 (U.S. Patent No. 6,697,221); and objected to the Drawings for allegedly failing to show certain features.

By this Amendment, claims 3-4 and 8-9 have been amended to provide a clearer presentation of the claimed subject matter and the Drawings have been amended to identify the edge portions and track width direction. Applicant submits that no new matter has been introduced. As such, claims 3-5 and 8-10 are currently presented for examination, of which claims 3 and 8 are independent.

Applicant further submits that, by virtue of the changes to the claims and Drawings, the respective rejections and objections have been overcome. Accordingly, Applicant requests the immediate withdrawal of the §112, ¶2 rejections of the claims and the objection to Drawings.

Insofar as the §102(e), rejections are still deemed to be relevant given the claim changes, Applicant traverses these rejections as follows:

I. Rejections Under §102(e).

As indicated above, claim 3 is directed to a perpendicular magnetic recording head and positively recites, *inter alia*, a write shield arranged apart from the main pole on a trailing side to the main pole and having a multilayered structure in which a nonmagnetic layer is sandwiched between magnetic layers, *the write shield comprising a central portion and edge portions along a track width direction and having such a shape that has a thickness that is larger in each of the edge portions than that in the central portion*. These features are amply supported by the

disclosed embodiments of the written description. (*See, e.g.*, Specification: page 20, line 9 to page 24, line 2, and FIGs. 13-17).

Applicant submits that the asserted references fails to teach each and every element of claim 1, including the features noted above. In particular, the Sato '221 reference discloses a perpendicular magnetic recording head Hv, an auxiliary magnetic pole layer 21 formed by plating of a ferromagnetic material, and auxiliary magnetic pole layer 21. The nonmagnetic insulating layer 12 is formed under the auxiliary magnetic pole layer 21 (between the auxiliary magnetic pole layer 21 and the trailing edge 11b of the slider 11) and in the periphery of the auxiliary magnetic pole layer 21. An upper surface 21a of the auxiliary magnetic pole layer 21 and an upper surface 12a of the nonmagnetic insulating layer 12 are on the same level. (*See, Sato '221*: col. 8, lines 7-16; FIGs. 1, 2).

Sato '221 further discloses a connecting layer 25 composed of NiFe or the like is formed on the surface 21a of the auxiliary magnetic pole layer 21 toward the back from the surface Hva (in the height direction; in the X direction). (*See, Sato '221*: col. 8, lines 17-20; FIGs. 1, 2). Furthermore, yoke layer 35 composed of NiFe or the like is formed on the insulating layer 33 with an inorganic insulating layer 34 composed of Al₂O₃ therebetween. A back section 24c of the main magnetic pole layer 24 and a front section 35b of the yoke layer 35 are *magnetically coupled* to each other, and a base 35c of the yoke layer 35 is *magnetically coupled* to the upper surface 25a of the connecting layer 25. (*See, Sato '221*: col. 8, lines 56-60; FIGs. 1, 2).

With this said, Applicant submits that there is nothing in Sato '221 that teaches or suggests a *write shield comprising a central portion and edge portions along a track width direction and having such a shape that has a thickness that is larger in each of the edge portions than that in the central portion*, as required by claim 3. Rather, if anything, the Sato '221 appears to teach that the central portion has a thickness that is larger than each of the edge portions (*see, Sato '221*: FIG 2). As such, Sato '221 teaches away from the recitations of claim 3.

Moreover, it is clear from FIG. 1 that in the configuration Sato '221, the connecting layer 25 is *magnetically coupled* to the auxiliary magnetic pole layer 21. In other words, the yoke

layer 35 of Sato et al. corresponds to a portion of the main pole of the present invention, and is clearly different from the claimed write shield of the present invention, which is not magnetically coupled to the main pole.

Thus, for at least these reasons, Applicant submits that Sato et al. is capable of teaching each and every element of claim 3. As such, claim 3 is clearly patentable over the asserted reference. In addition, because claims 4-5 depend from claim 3, claims 4-5 are patentable at least by virtue of dependency as well as for their additional recitations.

Moreover, because claim 8 recites similar patentable features as claim 3, claim 8 is patentable for at least the reasons posited relative to claim 3. And, because claims 9-10 depend from claim 8, claims 9-10 are patentable at least by virtue of dependency as well as for their additional recitations. Accordingly, the immediate withdrawal of the rejections of claims 3-5 and 8-10 is respectfully requested.

II. Conclusion.

All matters having been addressed and in view of the foregoing, Applicant respectfully requests the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.


Applicant's representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number **03-3975**.

The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully Submitted,

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